face of the ulcer, and more cuboidal-celled, scirrhus-like infiltration of its advancing edge.

The old classical view of this tumor being an ordinary scirrhus with fibrous overgrowth and fatty degeneration of the cells has probably a certain number of histological examinations to support it, as it has been accepted without question by so many authorities, but personally I have never happened to see a section substantiating this view.

On the other hand, adenocarcinoma of the breast is not mentioned by the writers above noted, with the exception of Halsted, and the *International Text-book,* which quotes his work, and the adenocarcinoma which Halsted figures is entirely different, histologically and clinically, from those noted above.

Is it not fair to presume that if these three tumors could come under observation at one laboratory, especially far from the great centres where such material is abundant, that more of these atrophic cancers, if all were studied by the microscope, might be found to have an adenomatous element which would justify their greater benignancy?

SUMMARY. 1. The term atrophic scirrhus is worthy of retention as describing an important clinical entity.

2. It is extremely doubtful whether such cases are benefited by operation.

3. Certain adenocarcinoma of the breast have the clinical history of the atrophic scirrhus.

4. It seems probable that if more of these tumors were studied histologically they might prove to have an adenomatous element to justify their comparative benignancy.

REPORT OF TWO CASES OF ULCERATIVE ANGINA AND STOMATITIS, ASSOCIATED WITH THE FUSIFORM BACILLUS AND SPIRILLUM OF VINCENT.

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(From the Laboratory of the Connecticut Hospital for the Insane.)

THE February number of THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES for the preceding year contains a report by Dr. Emil Mayer of one case of membranous angina and stomatitis associated with the fusiform bacillus and spirillum of Vincent, with a brief review of several articles published abroad. In view of the number of cases reported in Germany and France, he comments upon the absence of any English literature upon the subject, leading us to infer that the affection must be rare in this country.

It seems probable, however, that the deficiency may be partially explained by the neglect in recording cases, by lack of bacteriological examinations of fresh specimens, and difficulty in making a differential diagnosis clinically between this affection and syphilitic disease of the throat and mouth, or by the possibility that the angina or stomatitis, giving rise, as they do, to such mild symptoms, may be disregarded by the sufferer or treated by home remedies.

Vincent[1] first pointed out, in 1896, that certain types of ulcerative angina were associated with a fusiform bacillus and a spirillum, and two years later he reported[2] fourteen cases and spoke of the condition as a diphtheroid angina. In 1887 Bernheim[3] published his researches in thirty similar cases of angina and stomatitis, but he hesitated to consider the fusiform bacillus and spirillum as *the* etiological factor. Niclot and Marotte[4] gave an exhaustive description of the bacteriology of this condition, of which the following is an epitome:

The bacteriological characteristics of this affection of the mouth and throat is the almost constant *combination* of the fusiform bacillus and spirillum of Vincent.

The fusiform bacillus is swollen at the centre, with pointed extremities. It is generally straight, but is sometimes curved or bent upon itself and measures 6μ to 12μ. It is encountered in irregular masses, often as a diplobacillus, and sometimes two are seen lying at an angle to each other. The motility has been questioned by a few, but is maintained by Niclot and Marotte. The bacilli stain readily with the basic stains, but are generally decolorized by Gram's method. The involution forms sometimes resist the decolorizing agent, and occasionally show a vacuolation or granulation, but never a demonstrable spore formation.

The dimensions of the spirilla vary, but they are very long and of equal width throughout. They are observed singly, in groups, and are sometimes seen in an inextricable mass. Their motility may be retained for many hours, but diminishes rapidly on exposure to air or cold. The staining reaction differs from that of the bacilli only by the fact that the spirilla are invariably decolorized by Gram's method. Where the disease process is superficial the spirillum may be absent, but in the deeper lesions the combination of bacillus and spirillum is invariable.

In the superficial parts of the ulceration one finds Vincent's bacillus and spirillum associated with the streptococcus, pneumococcus, colon, and Klebs-Loeffler bacillus, but in the deeper parts only the bacillus and spirillum in their characteristic combination are found. Cultivation and inoculation have so far given negative results, unless combined with the streptococcus, when, after the "third passage," Niclot and Marotte recovered them from the mucus of the dysenteric discharges of a dog.

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[1] Annales de l'Institut Pasteur, 1896.

[2] Bull. de la Soc. des Hôpitaux, March, 1898.

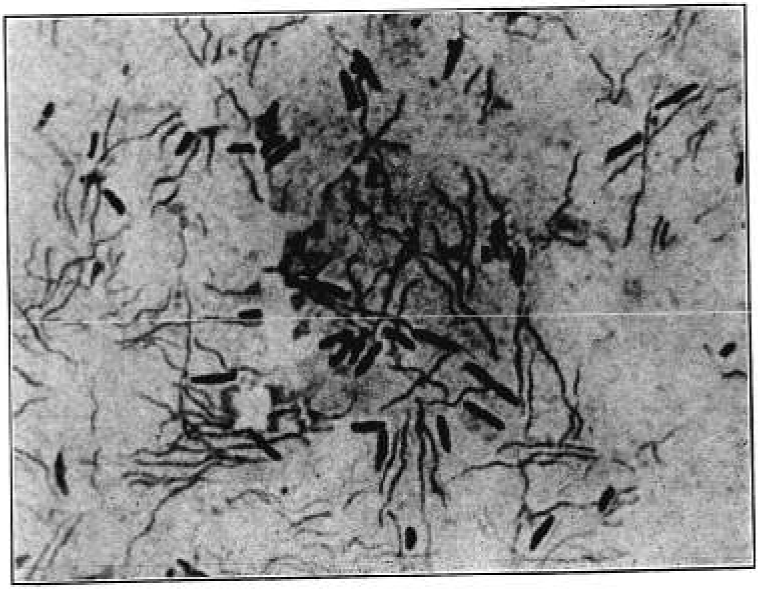
[3] Deutsche med. Wochenschr., 1897.

[4] Revue de Médecine, April 10, 1901.

My own observations have been limited to two cases, one of which seemed of special interest on account of the ulceration of the alveolar process following the extraction of a tooth.

The first case occurred in the service of Dr. A. C. Thomas, to whose courtesy I am indebted for the opportunity to observe the disease:

CASE I.—The patient, a rather frail young man, twenty years of age, employed at the Connecticut Hospital for the Insane, consulted the physician for a sore throat of several days' standing.



The bacilli and spirilla of Vincent as seen in the first case. Stained with dilute carbol-fuchsin and magnified 1500.

His family history was excellent; father, mother, and several brothers and sisters were all living and well; no other member of the family had ever suffered from sore throat, except one sister, who had a mild attack of diphtheria a few years ago. The young man had had the usual diseases of childhood without residuals, and had always been well, although not robust. His habits were exemplary, and venereal disease was positively denied. One year prior to this attack he suffered from diphtheria, the constitutional symptoms of which, he claimed, were mild, but he was isolated for several weeks on account of the persistence of the Klebs-Loeffler bacilli in the throat.

The sore throat for which he sought treatment caused him little discomfort except upon deglutition, but there was a constant feeling of soreness and itching, which did not inconvenience him sufficiently to interfere with his regular work. There was no glandular enlargement and very little increase in amount of saliva.

Four weeks previous to this time he had taken gas (to which he attributed his trouble) for the extraction of the last molar tooth on the left side of the lower jaw. One week later the gums became hyperæmic, and he discovered that the site of the tooth was covered with an irregular superficial ulcer, the floor of which was composed of a rusty-gray membranous exudate. From that time until he came under observation, three weeks later, the gums were never free from one or more of these patches. He experienced no particular inconvenience from these, until the tonsils became involved, between two and three weeks after the appearance of the first ulcer. At this time his temperature was 99°, pulse was full and regular, and he felt well, with the exception of the slight soreness in the throat.

Examination of the throat revealed rather large ulcers involving the greater portion of each tonsil and encroaching slightly upon the uvula. These ulcers were rather superficial, with irregular, inflamed edges, the floor being covered with a grayish membranous exudate, which was removed without difficulty, but re-formed rapidly. The slightest touch upon one of these areas left a bleeding surface. Small patches resembling those on the tonsils were present at the site of the extracted tooth, on the corresponding area of the lower jaw, and on the gum above the left upper bicuspid tooth.

Spreads and cultures from all these localities showed the same characteristics at three successive examinations, viz., red blood corpuscles, degenerated polymorphonuclear neutrophiles, and broken-down epithelial cells. The bacteria present were a few diplococci and very numerous bacilli and spirilla.

Morphologically, the bacilli were from 5μ to 10μ in length and quite thick. Some were larger at one extremity than at the other; many were swollen in the centre, with pointed extremities, while a few were curved like a comma. The majority were straight and often occurred as diplobacilli, while they were frequently seen in groups or lying at an angle of 60 to 80 degrees to each other. They were actively motile at first, but lost their motility in a few hours. The majority of them were decolorized by Gram's method, but stained well with the basic stains. A few of them when stained with Loeffler's alkaline methylene blue gave the impression of vacuoles, but no spores could be demonstrated, and in other stains this apparent vacuolation was absent. Efforts in staining for flagella were unsuccessful. The spirilla were 25μ to 40μ in length, but very slender. They were completely decolorized by Gram's method; otherwise they reacted to stains precisely as did the bacilli. They, like the bacilli, were actively motile at first, but lost their activity entirely after a few hours in bouillon.

The cultures made on blood serum showed a lance-shaped diplococcus and a very short bacillus, which was occasionally swollen in the middle, with pointed extremities, but was usually attenuated in the centre with bulbous ends. This, however, could not possibly be identified with the original bacillus as seen in the spreads. The other cultures on bouillon, agar, glycerin-agar, gelatin, litmus gelatin, litmus milk, etc., showed only pneumococci and large spore-bearing bacilli in threads. The cultures were all grown aërobically, and were under observation for sixty-two hours.

The patches on the tonsils and gums gradually disappeared under mild antiseptic treatment, and the mouth was entirely well three weeks after the involvement of the tonsils and six weeks from the appearance of the initial lesion.

CASE II.—The patient was a well-developed and nourished German woman, aged thirty-six years, who was admitted to the Connecticut Hospital for the Insane, November 24, 1902, suffering from manic-depressive insanity, maniacal form, of one week's duration.

She was the mother of eight children, the youngest being some ten weeks old. Childbirth and lactation were the assigned causes of insanity, but she seemed in good physical condition, and an examination of the blood gave a slight increase of both erythrocytes and leucocytes as follows: hæmoglobin, 92 per cent.; erythrocytes, 5,536,666; leucocytes, 9,200; polymorphonuclear neutrophiles, 75 per cent.; small lymphocytes, 16.2 per cent.; large lymphocytes, 7 per cent.; eosinophiles, 1.4 per cent.; mast-cells, 0.2 per cent.; myelocytes, 0.2 per cent.

Her family and personal history were negative. During her periods of marked psychomotor unrest she talked incessantly and refused food. She was constantly moistening her dry, cracked lips with her tongue, in doing which her tongue came in contact with her partially closed teeth. This irritation caused a hyperæmia, which finally resulted in an abrasion of the mucous membrane along the edges of the tongue. This surface soon became a superficial ulcer, covered with a creamy exudate, which assumed a membranous character and was very adherent. A few days later a similar exudate appeared along the border of the lower gums, which was, however, easily removed, leaving a bleeding surface. Salivation was not marked, nor were the glands enlarged, but the fetor was excessive. The temperature was normal, and the patient made no complaint except to utilize her sore mouth as an excuse for not eating.

Several bacteriological examinations of scrapings from the diseased areas showed the bacillus and spirillum of Vincent, accompanied by a large number of staphylococci and a few large non-motile bacilli stained by Gram's method. The bacilli (Vincent) were less motile than in the first case, but the spirilla were quite as active. The majority of the cultures produced a pure growth of staphylococcus albus, while others were associated with a large spore-bearing bacillus. Under daily applications of silver nitrate the stomatitis disappeared in about three weeks.

The clinical diagnosis in the last case was gangrenous stomatitis. A stomatitis of this character has occasionally been recorded among insane patients, and it would be very interesting to know how many of these cases would have revealed the presence of the bacillus and spirillum of Vincent if bacteriological examinations had been made. Unfortunately, there is no record of any investigations along this line. Both of these cases apparently had their origin in a slight trauma, the first in the extraction of a tooth, the second in the abrasion of the mucous membrane of the tongue from rubbing against the teeth.

The duration of the affection, as described by Vincent, Bernheim, and others, varies from ten days to six weeks, and there is a tendency toward a spontaneous cure. Consequently, little is known of the pathological anatomy of the condition, as no deaths are recorded from this disease, when uncomplicated. I find no evidence that the disease is communicated easily from one individual to another, and the absence of constitutional symptoms excludes the production, or rather the absorption, of toxins.

The study of cases of this character is specially valuable, not only for the importance of the disease itself, but as an aid in differentiating it from diphtheria and syphilitic affections, which it so closely resembles clinically.

Viewed in this light it assumes an importance it otherwise could not claim, and it is surely worth while to give the patient the benefit of a thorough bacteriological examination of both spreads and cultures in every case of suspected diphtheria or syphilis before subjecting them to a possibly unnecessary course of medication.

THE "IDIOPATHIC" OR "ESSENTIAL" DROPSIES OF CHILDHOOD.

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During the summer of 1902 a number of cases of unexplained œdema came under the observation of the writer in the wards of the Boston Floating Hospital for Children. On reference to the text-books on diseases of children for an explanation of the phenomenon, it was found that, with one or two exceptions, the subject had received either very brief mention or no consideration at all.

Receiving at that time but little assistance from the text-books, the writer sought to find in the general literature some description of similar cases. In view of his experience with the text-books he was not prepared to find a literature very voluminous or interesting. Quite the contrary has, however, been the fact. As report after report of these or allied cases was found the subject became one of ever-increasing interest.

This fact must be the writer's apology for the desire to report cases from his own limited experience.

The characteristic feature of this condition is the appearance of œdema, in one or more parts of the body, *without albuminuria* or *sedimentary evidence of organic disease of the kidneys; without clinical* or *post-mortem* evidence of *organic disease* of the *heart* or *kidneys.*